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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,213	06/02/2006	Joung-Youl Shin	2017-087	3578
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EXAMINER				
LE, HUYEN D				
ART UNIT		PAPER NUMBER		
2615				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/596,213

Applicant(s)

SHIN ET AL.

Examiner

HUYEN D. LE

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-11 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CI/CD)
- Paper No(s)/Mail Date 6/2/06

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

I. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 6-9 rejected under 35 U.S.C. 102(b) as being anticipated by Kim (U.S. patent 6,438,246).

Regarding claims 1 and 6-9, Kim teaches a base frame (10, 20), at least one magnetic body (15, 17, 22, 38) coupled to the base frame as claimed, a diaphragm (11, 30), and at least one coil plate (12, 28) formed with a voice coil (13, 26). As shown in figures 1-2, the coil plate (12, 13, 28, 26) is inserted vertically into spaces between the opposite polarities of the magnetic body and connected to the diaphragm (11, 30). Further, Kim shows a coil plate guide means (the

elastic damper 14 or 32) coupled to the coil plate for guiding the position and vibration direction of the coil plate such that the coil plate (12, 28) is spaced from the magnetic bodies and vibrates vertically.

4. Claims 1-4 and 6-9 rejected under 35 U.S.C. 102(b) as being anticipated by Harwood (U.S. patent 4,190,746).

Regarding claims 1 and 6-9, Harwood teaches a base frame (11), at least one magnetic body (6, 7, 23, 24) coupled to the base frame as claimed, a diaphragm (1, 19), and at least one coil plate formed with a voice coil (3, 5, 21, figures 1, 2). As shown in figures 1-2, the coil plate (3, 5, 21) is inserted vertically into spaces between the opposite polarities of the magnetic body and connected to the diaphragm (1, 19). Further, Harwood shows a coil plate guide means (10, 14, 27, 28) coupled to the coil plate (3, 21) for guiding the position and vibration direction of the coil plate such that the coil plate (3, 21) is spaced from the magnetic bodies and vibrates vertically.

Regarding claims 2-4, the base frame (11) is configured to have open top and bottom portions, the diaphragm (1, 19) is coupled to an upper end of the coil plate (3, 21), and the coil plate guide means (10, 27) is coupled to a lower end of the coil plate (3, 21) to function as another diaphragm.

5. Claims 1 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art (figures 1 and 2) as admitted by the Applicant.

Regarding claims 1 and 6-9, the admitted prior art (figures 1, 2) shows a base frame (35), at least one magnetic body (the upper and lower plates 31 to 34) coupled to the base frame as claimed, a diaphragm (30), and at least one coil plate (36) formed with a voice coil (38). As shown in figures 1-2 of the admitted prior art, the coil plate (36) is inserted vertically into spaces between the opposite polarities of the magnetic body and connected to the diaphragm (30). Further, the admitted prior art shows a coil plate guide means (the suspension or the edge 39) coupled to the coil plate (36) through the diaphragm (figure 1) for guiding the position and vibration direction of the coil plate such that the coil plate (36) is spaced from the magnetic bodies and vibrates vertically.

Regarding claim 10, the admitted prior art shows the at least one magnetic body (the plates 31 to 34, figure 2) that is formed to take the shape of a comb with the protrusions and depressions in a horizontal direction, and the coil plate (36) as claimed.

Regarding claim 11, the admitted prior art shows the coil plates in the form of a flat panel that are arranged in parallel as claimed.

Allowable Subject Matter

6. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Paddock (U.S. patent 5,604,815) teaches a voice coil (14) that includes an elongated rectangular substrate and a conductive pattern.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SINH TRAN can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUYEN D. LE/
Primary Examiner, Art Unit 2615

HL
April 24, 2008

